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OUTLINE SPECIFICATION

SUMMARY & ARCHITECTURAL

City Wide Community Center Project
Schematic Design
Concord, New Hampshire

Project: 4401

August 25, 2016

2009 International Building Code

Use Group: A-3 (Assembly) changed from E (Education – former Dame School)

Building Construction Type: IIIB, one story, fully sprinkled building

City of Concord NH Ground Snow: 70 psf, flat roof snow (60 psf)

(See attached Code Review)

DIVISION 1: GENERAL CONDITIONS

- A. General Contractor Responsibilities (project to be bid winter 2016):
 - 1. Project management, supervision, safety program (100% site safety responsibility).
 - 2. Field layout, shop drawings, record and as-built drawings, testing services, quality control.
 - 3. General liability, workman's compensation insurances.
 - 4. Payment and performance bonds, builder's risk insurance, building permits.
 - 5. Temporary service (electrical, water, sanitary, power, heat, fire protection, enclosures/barriers). Note.
 - 6. Site fencing, dust and water control.
 - 7. Construction cleaning, final clean-up, legal disposal of waste.
 - 8. Signs and project identification, field office and storage trailers.
 - 9. Apply for City demolition permit(s) and building permits and pay all related fees.
- B. Owner Responsibilities:
 - 1. Site plan approvals and regulatory review (along with A&E).
 - 2. Reasonable, unimpeded access to the site.
 - 3. Timely decision making and desired night time security.
 - 4. Site surveys and establishment of project site baseline.
 - 5. Construction materials testing.
 - 6. Determine and pay for FFE costs, including library. Contract with furnishings vendor.
 - 7. Determine IT/communications/security costs (wires, racks, devices, panels, cameras, etc.). Contract with IT vendor.
 - 8. Jet cleaning/routing of existing catch basins, storm drains and sewer lines. ??

9. Removal of existing furnishings.
10. Remove H/C stage lift for compliance.
11. Pressure and flow test nearest street hydrant for sprinkler design confirmation.

DIVISION 2: SITEWORK

(New CSI format Div. 31 Earthwork, Div. 32 Exterior Improvements, Div. 33 Site Utilities)

- A. Site Supervision and Safety:
 1. Site supervision.
 2. Construction traffic control from adjacent roads as required; pedestrian traffic control as required.
 3. Construction signage and barriers.
 4. Protection fencing of lay down area perimeter.
 5. Protective fencing at foundations and open excavations.
- B. General Site Prep:
 1. Protection, erosion and dust control, site dewatering (if needed).
 2. Loam stockpile and screening; include removal and/or re-use.
 3. General cuts and fills at addition site area, including removal of existing buildings and foundations identified on the drawings for demolition within footprint to slab subgrade of proposed new addition.
 4. General grading and contouring of site.
 5. 24" gravel base at all new parking and road paved areas for asphalt pavements (if new parking areas are identified). Egress doors heed paved pathways to common site locations. Walkways to be 5' wide.
 6. 12" gravel base to be provided at new walkways and courtyards.
 7. Excavate and backfill exterior utilities and utility extensions. 2" copper into 1940's building to be extended into new mechanical room. 2" copper into 1960's wing to remain. 6" fire into Cupola Building to remain.
 8. Remove excess materials from site if required.
 9. Building abatement demolition at Gamble property (Add Alternate).
 10. Abatement of existing gym whether demolished or reused (Add Alternate).
 11. Minor demolition at existing 1960's building.
 - a. Abatement of all ACBM's (see next item below).
 - b. Ceilings and toilet fixtures to be removed and replaced with new.
 - c. Ductwork, plumbing equipment related to existing heating and hot water system.
 - d. Existing kitchen equipment.
 - e. Existing roofing and....
 - f. All large closets in classrooms.
 - g. Bathroom tiles, partitions.
 12. Hazardous building materials abatement (see attached final HBM Report):
 - a. **1940's building:** full abatement prior to demolition, many locations.

- b. **1960's addition** – full abatement- no future maintenance required by City:
 - i. Exterior fascia panels.
 - ii. Mastic adhesive at cove base.
 - iii. Pipe insulation above ceiling and behind exist. classroom casework (wrap and cut at pipe joints, etc.).
 - iv. Interior door caulking at door frames.
 - v. Ceramic tile grout and mastic.
 - vi. Sinks for basin undercoat.
 - vii. Flooring and mastic.
 - viii. Window Caulking.Note: Roofing materials do not have ACBM's.
- c. **Gamble property:**
 - i. Abate all prior to demolition. Joint compound mixed w/ GWB does not require full abatement of GWB. Workers need to wear minimal PPE, and GWB needs to go to licensed disposal facility only.
 - ii. If abatement/demolition does not occur, City to install "Asbestos Hazard" signs at all building entry locations and garage.
- d. **Old Gym:** Abate all (floor tile/mastic and caulking) whether bldg. is demolished or re-purposed. Eliminate future maintenance for the City. Maint. Shop and/or Storage use will have materials drag on the floor creating an asbestos hazard.

C. Building Pad Preparation:

- 1. Excavate and backfill as required for structure; provide imported gravel/granular backfill throughout. Removal of material from site shall require approval.
- 2. 8" crush or well graded gravel and reinforced vapor barrier beneath all interior slabs-on-grade (see Division 7 for underslab rigid insulation).
- 3. Foundation drains not required.
- 4. Excavate and backfill interior utilities.
- 5. Fine grade for slabs.

D. Utilities:

- 1. Connect to existing electrical service.
- 2. Allowance for reconstruction of natural gas service that will be re-routed for new building.
- 3. New roof drain connection into existing catch basin near old gym.
- 4. Site electrical to include demolition of existing electrical service and a new primary underground conduit for electrical (primary wiring and transformer by power company), transformer pad, secondary underground conduit and wiring into building, telecom data conduit (with pull string) and site lighting with building LED wall packs.
- 5. Extend existing sewer from 1940's building into new addition.

E. Finish Sitework:

1. Existing parking lot to remain, crack seal and stripe spaces.
2. Remove and reconstruct entrance site walkway and drain to existing catch basin in existing grass courtyard.
3. 2" thick, 5' wide bituminous walks typical throughout new site areas.
4. Trash dumpster area (location not designated yet) with chain link fencing and gate, bollards (Division 5), and 12" concrete base pad.
5. Site directional and ADA signage package.
6. Monumental major site entry sign to be brick with CMU back-up on concrete foundation (Add Alternate).
7. Allowance for bicycle racks, picnic benches, and trash containers.
8. 4" loam and seed at general new lawn areas.
9. Minimal new landscaping (protect existing).

DIVISION 3: CONCRETE

A. Foundations (3,000 psi in 28 days, air entrained where exposed to weathering):

1. Frost foundations with 60# of steel reinforcement/cy.
2. Column footings with 125# of steel reinforcement/cy.
3. Column piers with 200# of steel reinforcement/cy.
4. Structural entries with 85# of steel reinforcement/cy.
5. Interior CMU strip footings with 45# of steel reinforcement/cy.
6. Geotechnical Report (See attached): Use 2,000 psf soil bearing pressure for spread footings. No site dewatering required. No piles required.

B. Slabs:

1. Interior at grade (4,000 psi 28 days):
 - a. 6" structural entry slabs with 85# of steel reinforcement/cy.
 - b. Equipment pads as required.

C. Miscellaneous:

1. 1/2" thick joint fillers all slab edges ending against vertical surfaces, full slab depth.
2. Membrane cure, compatible with future finished flooring, at all areas (wet cure option).
3. Liquid hardener sealer at floors to remain as exposed interior concrete.
4. Embedment plates at steel bearing on concrete or CMU.
5. Anchor bolts and grout plates at steel columns.
6. Labor for concrete embedments.

D. Precast Concrete Sills and Headers in New Building Addition.

DIVISION 4: MASONRY

- A. Unit Masonry:
 - 1. New building addition:
 - a. 8" CMU walls at exterior walls 3' high.
 - b. Standard brick.
 - c. 8" CMU walls at 9' high at Gymnasium (transition to impact resistant GWB above to top of structure.
 - d. CMU locker bases.
 - 2. Standard brick exterior veneer walls from 3' to 9' above foundations.
 - 3. Re-point and clean existing brick at 1960's building.

DIVISION 5: STEEL

- A. Structural Steel/Joist/Deck:
 - 1. Steel beams, tube steel columns for building addition except gym.
 - 2. Open web steel bar joists for building addition except gym.
 - 3. Metal deck over building addition.
 - 4. Gym will be pre-engineered metal building with metal roofing, exterior walls to be CMU to 9' H and insulated metal siding above. Design additional 10 psf for future solar panels.
- B. Cold Formed Metal Framing:
 - 1. 6" Exterior Stud Walls for structural support/back-up of CMU and brick veneer.
 - 2. 3-5/8" Non-load bearing separation partitions.
 - 3. Miscellaneous interior partitions, soffits, etc.
- C. Miscellaneous Metals (galvanized where exposed to weather):
 - 1. Bollards at site transformer pad and trash dumpster enclosures.
 - 2. Miscellaneous HVAC, basketball, fabric partition and basketball scoreboard system supports as required.
 - 3. Expansion joint floor, wall, and roof assemblies between pre-engineered metal building and new steel structure.
 - 4. Exterior SS floor grilles at main entries.
 - 5. Loose lintels for masonry openings in existing 1960's building.

DIVISION 6: CARPENTRY

- A. Rough Carpentry:
 - 1. Door and window blocking, headers, and shims.
 - 2. Interior wall and surface blocking as required.
 - 3. Electrical plywood panel backers.
 - 4. Exterior roofing blocking and cants.
- B. Finish Carpentry and Architectural Woodwork:
 - 1. Architectural woodwork/casework provided for Reception Counter, warming kitchen cabinets and miscellaneous casework indicated on plan.
 - 2. Plastic laminate window sills, painted wood, jambs and casings.

3. Solid surface countertops in locker rooms.
4. Miscellaneous display cases and trimwork.

DIVISION 7: THERMAL AND MOISTURE

- A. Waterproofing Systems:
 1. None required at the Foundations.
- B. Insulation:
 1. Exterior walls: 2-½" spray foam insulation applied to interior surface of exterior sheathing with 4" batt insulation to interior face of 6" studs at new addition.
 2. 2" XPS foundation perimeter insulation extending 24" under perimeter slab.
 3. Air barrier applied to exterior sheathing at new addition.
 4. Provide acoustical insulation in walls between locker rooms and corridors.
 5. Underslab 10 mil Stego Wrap Class A Vapor Retarder.
 6. Due to extensive renovation of buildings and change of use from education (E) to assembly (A), exterior of 1960's building will need insulation at exterior walls. Install 6" metal studs, 1" from face of existing CMU, spray 2-½" of foam insulation with 4" batt insulation cover with impact resistant drywall.
 7. Pre-engineered metal building to have R-38 roof insulation with metal roofing.
- C. Membrane Roofing: TPO .060 adhered membrane roofing with R38 rigid insulation, tapered insulation and crickets, 1/2" protection board, as required for 1960's building and flat roof portion of new addition.
 1. At 1960 building and new addition (except pre-engineered building).
 2. Existing pitched roof at multi-purpose room: Remove existing asphalt shingles and replace with 40-year architectural shingles.
 3. Gym pitched metal roof with vapor retarder insulation system.

DIVISION 8: DOORS AND GLASS

- A. Doors and Hardware Systems:
 1. Knock down frames not acceptable, welded only.
 2. All exterior door assemblies to be heavy duty aluminum doors and storefront system. Gymnasium doors shall be insulated galvanized HM. All exterior doors shall have continuous hinges.
 3. All interior doors shall be solid core maple veneer. Kitchen and maintenance area doors shall be HM 1960's wing. Re-use existing doors and frames.
 - a. All doors with required hardware systems and fire rated as required.
 - b. Door card reader access control hardware at Staff proprietary entrances. By City, coordinate with A&E.
 - c. ADA blue paddle push door hardware systems at main vestibule and north

- entrance.
- d. Access doors and panels for MEP system access.
- B. Storefronts:
 - 1. Aluminum frame Kynar finish storefront exterior and interior door systems.
 - 2. Interior storefront doors with sidelites at main office.
- C. Windows:
 - 1. EFCO series aluminum windows to match elevations at new addition.
 - 2. Existing windows to remain: clean, caulk and provide locking mechanisms.
- 4. Glazing:
 - 1. 1" insulated and 1/4" door glass systems; provide tempered glass within 18" of ground and doors.
 - 2. Mirrors see Division 10.

DIVISION 9: FINISHES

- A. Drywall:
 - 1. Abuse resistant 5/8"^t GWB in all corridors, classrooms, locker rooms, over 6" exterior studs at 1960's addition. All office areas shall be 5/8" GWB. Provide moisture resistant GWB within 4' of a plumbing fixture.
 - 2. Dense Armor plus ceilings on furring at shower areas.
 - 3. Drywall ceilings on furring at electrical related areas.
- B. Acoustical:
 - 1. 2 x 4 square edge humidity resistant, anti-bacterial acoustical ceilings typical in Program Rooms.
 - 2. 2 x 4 square edge vinyl face acoustical ceiling at warming kitchen and locker rooms.
 - 3. 2 x 4 abuse and moisture resistant ceiling tiles in corridors.
 - 4. Gymnasium shall be exposed decking and utilities with Tectum panels on end walls of new gym 9' to 20'.
- C. Flooring and Wall Finishes:
 - 1. VCT with rubber cove base in all Program, Main Office waiting, corridors, storage rooms, health suite and cafeteria.
 - 2. Ceramic tile wet wall with tile base at custodial, and restrooms including 1960's restrooms.
 - 3. Ceramic tile full height at shower area walls.
 - 4. Carpet squares with rubber base cove at Offices, Reception. VCT in all Program Rooms except one will have resilient composite flooring for dance, yoga, etc.
 - 5. Ceramic tile flooring and cove base at shower area. Locker rooms to have VCT.

6. Multi-purpose sports flooring at Gymnasium.
7. Cupola Building to have resilient, composite flooring for multi-use.
8. Sealed concrete floors at Storage, Mechanical, and Electrical areas.
9. Provide porcelain tile flooring in main lobby area.
10. Ceramic tile flooring and wainscoting at walls except 8' at wet walls.
11. VCT at warming kitchen.
12. Walk-off mats at entrance.

D. Painting:

1. HM Doors and frames.
2. Drywall.
3. Exposed to view structure and deck. Exposed to view structure and deck at exterior canopies.
4. Wood trims and panels at interior.
5. Exposed to view CMU with filler coat.
6. Exposed miscellaneous metals, piping, and duct.
7. Refinish Cupola Building stage.

DIVISION 10: SPECIALTIES

A. Allowances to be established for:

1. Floor mount, ceiling braced HDPE toilet and urinal partitions.
2. Toilet accessories, grab bars, mirrors, and hand dryers; include baby change stations at public Toilet rooms. Provide shower curtains, rods, wall hooks and benches at locker rooms/shower stall areas.
3. Lockers 12" x 12" x 72" double tier.
4. Signage ADA; building directories and bulletin boards.
5. Fire extinguishers with semi-flush cabinets at public spaces; wall mounted at mechanical or janitorial areas. Provide electronic monitoring.
6. Shower seats ADA per required shower fixture count.
7. ADA lift for stage (to be made operational by City prior to project).
8. Gym fabric/separation curtain.
9. Stage lighting see electrical outline specification.
10. Re-use operable partition in cupola room.
11. Metal corner guards at all impact resistant outside corners.
12. Aluminum louvers with factory Kynar finish.

DIVISION 11: EQUIPMENT

A. Allowances to be established for:

1. Kitchen equipment will include two standard upright refrigerators/freezers, two microwave ovens, and coffee pot.
2. Gymnasium wall pads, 6 electronic retractable basketball goals, electronic curtain divider, scoreboard.
3. Manual, collapsible bleachers for 300 seats.

4. Center court logo, basketball, volleyball, and pickle ball striping.

DIVISION 12: FURNISHINGS - (By City).

DIVISION 13: SPECIAL CONSTRUCTION - not used.

DIVISION 14: CONVEYING SYSTEMS

- A. City to revive H/C lift at stage of Cupola Building.

DIVISION 15: MECHANICAL & PLUMBING

(New CSI Format – Division 21 Fire Suppression, Division 22 Plumbing and Division 23 HVAC)

A. Fire Suppression:

1. Wet sprinkler system utilizing existing sprinkler entrance.
2. Dry system in attic space of Cupola Building.

B. Plumbing:

1. Replace all existing plumbing toilets, urinals, lavatories in 1960's building with new.
2. All new fixtures to be water saving.
3. New sinks in locker rooms, restrooms, serving kitchen to be new.\
4. Drinking fountains to have bottle filler station.
5. New floor mounted water closets in new locker rooms and restrooms.
6. Floor drains in restrooms, locker rooms, mechanical rooms.
7. Hose bibs at exterior of building and toilet rooms with locking handles.
8. Water piping – copper or PEX tubing per contractor's option.

C. HVAC:

1. Two (2) new condensing natural gas-fired boilers in new mechanical room.
2. Hot water distributed throughout entire building from new mechanical room.
3. 1960's Building: Individual heating and cooling units individually controlled in each program room. Fin-tube radiation along exterior walls. Some exposed ductwork in some rooms.
4. Lobby and Reception/Admin Core: Roof top heating and cooling VAV boxes for control of individual rooms with exposed ductwork in low ceiling areas.
5. Perimeter fin-tube radiation.
6. Cupola Building: Roof top mounted heating and cooling unit located on new addition (with screen), ductwork distribution and exterior wall fin-tube.
7. Gymnasium: Roof top mounted heating (no A/C) unit located on new addition flat roof (with screen), supply air under/behind bleachers, return high in space. Impact resistant fin-tube around perimeter.

8. IT Room ductless split heating/cooling system.
9. Controls to be DDC system for building allowing remote monitoring via internet, phone and email.

DIVISION 16: ELECTRICAL

- A. Demolish electrical service and all existing electrical components and install new.
- B. Unitil to provide a new pad mounted transformer rated for 1200 amp, 3-phase 120/208 volt electrical. Transformer to be located outdoors and near electrical room.
- C. Contractor to provide 1200 amp distribution panel along with multiple electrical panels located throughout the existing and new building.
- D. Site lighting to be accomplished by LED, cut-off wall packs. No site/yard lighting is included other than wall packs.
- E. All interior power, LED lighting, outlets, etc. to be new. 1960's building to have surface mounted "wire mold" where hidden conduits are not feasible.
- F. Fire alarm panel to be new and meet the requirements of the Concord Fire Department.